SEQUENCE LISTING

<110> Petchpud, Wasinee Nina
LeBrun, Stewart J.

<120> MICROARRAY-BASED ANALYSIS OF RHEUMATOID ARTHRITIS MARKERS

<130> MGENE.016A

<150> 60/417,068
<151> 2002-10-08

<160> 14

<170> FastSEQ for Windows Version 4.0

<210> 1
<211> 823
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(823)
<223> n = A,T,C or G

<400> 1
gcnntgccgc ctataattaa gnngagaaat taactatgag aggatcgcat caccatcacc 60
atcacggatc ccccgggctg caggaattcg gcacgagggc tacttgggag gctgaagtgg 120
gaggatggcc tgagctcaag gagatgcagg ctgcagtggg ctgtgattgt gccactgcac 180
tccagcctgg gcaccaatgt gagcctcgtg ccgaattcgg cacgagggcg gcgttggcgg 240
cttgtgcagc aatggccaag atcaaggctc gagatcttcg cgggaagaag aaggaggagc 300
tgctgaaaca gctggacgac ctgaaggtgg agctgtccca gctgcgcgtc gccaaagtga 360
caggcggtgc ggcctccaag ctctctaaga tccgagtcgt ccggaaatcc attgcccgtg 420
ttctcacagt tattaaccag actcagaaag aaaacctcag gaaattctac aaggggcaag 480
aagtacaagc ccctggaact tgcggcctaa gaagacacgt gccatgcgcc gccggctcaa 540
caagcaccaa gaaaacctga anaccaagaa gcagcaancn ggaaggaccg gcttgtaacc 600
cgcttgcngg aaattacccg gtcaaggccn tgaggggcgc attggtcaat aaaaccacaa 660
cctggcntga gaaactcacc ccanntntnc ctnactcgag gggggggccc cgggtaancc 720
ccggggtttc gaaccttgca aanccaanct ttaatttaac ttgaaccttt gggaacttcc 780
ctggttgnat taannntncca attnaatgaa ccnnnaaaaa ccc 823

<210> 2
<211> 194
<212> PRT
<213> Homo sapiens

<400> 2
His His His His His His Met Ala Ala Ser Ala Phe Ala Gly Ala Val
1 5 10 15
Arg Ala Ala Ser Gly Ile Leu Arg Pro Leu Asn Ile Leu Ala Ser Ser
20 25 30
Thr Tyr Arg Asn Cys Val Lys Asn Ala Ser Leu Ile Ser Ala Leu Ser

```
        35                  40                  45
Thr Gly Arg Phe Ser His Ile Gln Thr Pro Val Val Ser Ser Thr Pro
    50                  55                  60
Arg Leu Thr Thr Ser Glu Arg Asn Leu Thr Cys Gly His Thr Ser Val
65                  70                  75                  80
Ile Leu Asn Arg Met Ala Pro Val Leu Pro Ser Val Leu Lys Leu Pro
                85                  90                  95
Val Arg Ser Leu Tyr Tyr Phe Ser Ala Arg Lys Gly Lys Arg Lys Thr
            100                 105                 110
Val Lys Ala Val Ile Asp Arg Phe Leu Arg Leu His Cys Gly Leu Trp
        115                 120                 125
Val Arg Arg Lys Ala Gly Tyr Lys Lys Lys Leu Trp Lys Lys Thr Pro
    130                 135                 140
Ala Arg Lys Lys Arg Leu Arg Glu Phe Val Phe Cys Asn Lys Thr Gln
145                 150                 155                 160
Ser Lys Leu Leu Asp Lys Met Thr Thr Ser Phe Trp Lys Arg Arg Asn
                165                 170                 175
Trp Tyr Val Asp Asp Pro Tyr Gln Lys Tyr His Asp Arg Thr Asn Leu
            180                 185                 190
Lys Val
```

<210> 3
<211> 744
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(744)
<223> n = A,T,C or G

<400> 3
gcnnnnnngc nnnnnnnngg gcnccnanaa atagccgatc nacctggngc tttttatcgc 60
aactctctac tgtttctcca tacccgtttn ttttgggcta naaataattt tgtttaactt 120
taagaaggag atatacatac ccatgggctc tggatccggt gatgacgatg acaagctcgc 180
ccttaaaccc tcactaaagg gaacaaaagc tggagctcca ccgcggtggc ggccgctcta 240
gaactagtgg atcccccggg ctgcaggaat tcggcacgag ggtttgccgc cagaacacag 300
gtgtcgtgaa aactacccct aaaagccaaa atgggaaagg aaaagactcn tatcaacatt 360
gtcgtcattg gacacgtaga ttcgggcaag tccaccacta ctggccgtcg tnttacaagg 420
gcgagcttga aggtaagcct atccctaacc ctctcctcgg tctcgattct acgcgtaccg 480
gtcatcatca ccatcaccat tgagtttaaa cggtctccan cttggctgtt tttggcggat 540
gagagaagat tttcagcctg atacagatta aaatcagaac gcagaagcgg tctgataaaa 600
cagaatttgc ctggcgggna gtnaccgcgg gtgggtccaa ccttgaaccc caattgcccg 660
aactcagaaa gtgaaaaccg ccggtaagcc ccgaattggt tagttgttgg gggtcttccc 720
catttgcnaa naagttaggg gaaa   744

<210> 4
<211> 76
<212> PRT
<213> Homo sapiens

<220>
<221> VARIANT

<222> (1)...(76)
<223> Xaa = Any Amino Acid

<400> 4
Thr Leu Thr Lys Gly Asn Lys Ser Trp Ser Ser Thr Ala Val Ala Ala
 1   5   10   15
Ala Leu Glu Leu Val Asp Pro Pro Gly Cys Arg Asn Ser Ala Arg Gly
            20   25   30
Phe Ala Ala Arg Thr Gln Val Ser Glx Lys Leu Pro Leu Lys Ala Lys
        35   40   45
Met Gly Lys Glu Lys Thr Xaa Ile Asn Ile Val Val Ile Gly His Val
    50   55   60
Asp Ser Gly Lys Ser Thr Thr Thr Gly Arg Arg Xaa
65   70   75

<210> 5
<211> 542
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(542)
<223> n = A,T,C or G

<400> 5
gtaaaacgac ggccagtgaa ttgtaatacg actcactata gggcgaattg ggtaccgggc 60
ccccccctcga gttttttttt ttttttttat tcggctcngt ctaatccttt ttgtagtcac 120
tcataggcca gacttngggc tagnatgatn gattaataag agggatgaca taactattag 180
tggncaggnt ngttgtttgt agnggctcnt ggcaggggna aaaggagggc aaatttctag 240
atcaaataaa taagaaggta atagctacta aanaaagaat tttaatgnag aaagggaccc 300
gggcggnngg atatagggtc naagccgcnc tcgtaagggg tgggatttttt ctatgtagcc 360
nntngagttg tggtnagtcn aaaatttaat aaattattag tagtaaaggc ctagggaggg 420
ntgttgccct cgtgcccgaa ttncctgcca gcccgggggg aatccnccta gttcctaaga 480
gccggccccc nccccngaag ggangctccc agccttttttg atccctttng tggngngtta 540
at 542

<210> 6
<211> 197
<212> PRT
<213> Homo sapiens

<220>
<221> VARIANT
<222> (1)...(197)
<223> Xaa = Any Amino Acid

<400> 6
Val Lys Arg Arg Pro Val Asn Cys Asn Thr Thr His Tyr Arg Ala Asn
 1   5   10   15
Trp Val Pro Gly Pro Pro Ser Ser Phe Phe Phe Phe Phe Tyr Ser Ala
            20   25   30
Xaa Ser Asn Pro Phe Cys Ser His Ser Glx Ala Arg Leu Xaa Ala Xaa
        35   40   45

```
Met Xaa Asp Glx Glx Glu Gly Glx His Asn Tyr Glx Trp Xaa Xaa Xaa
    50                  55                  60
Leu Phe Val Xaa Ala Xaa Gly Arg Xaa Lys Arg Arg Ala Asn Phe Glx
65                  70                  75                  80
Ile Lys Glx Ile Arg Arg Glx Glx Leu Leu Xaa Lys Glu Phe Glx Xaa
                85                  90                  95
Arg Lys Gly Pro Gly Arg Xaa Asp Ile Gly Xaa Lys Pro Xaa Ser Glx
            100                 105                 110
Gly Val Gly Phe Phe Tyr Val Ala Xaa Xaa Val Val Xaa Ser Xaa Lys
        115                 120                 125
Phe Asn Lys Leu Leu Val Val Lys Ala Glx Gly Gly Xaa Leu Pro Ser
    130                 135                 140
Cys Pro Asn Xaa Leu Pro Ala Arg Gly Glu Ser Xaa Glx Phe Leu Arg
145                 150                 155                 160
Ala Gly Pro Xaa Pro Xaa Arg Xaa Ala Pro Ser Leu Phe Asp Pro Phe
                165                 170                 175
Xaa Xaa Xaa Leu Ile Xaa Gly Gly Ala Phe Lys Xaa Lys Ala Tyr Pro
            180                 185                 190
Xaa Pro Xaa Pro Xaa
        195
```

<210> 7
<211> 705
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(705)
<223> n = A,T,C or G

<400> 7
attaaccctc actaaaggga acaaaagctg gagctccacc gcggtggcgc cgctctagaa 60
ctagtgggat cccccgggct gcaggaaatt cggcacgagg gaanaatccg ncgcgtccac 120
aannaccntt nnccccccaac caacannaan aacanttcnn ncnnaaatcn aagtnctccn 180
agactnanaa tcnnccatnt natntaaatt ttcngggggg gggnncccng naancnaaat 240
tccccccctta nggaaggggg nccttntnna nangngnnat nctttaaagn cnaaangcct 300
ttntncnnna taancccntt ntctttgggg gctcccnaaa ttttataacc ncnaggancc 360
ncgggnttct ttntttancn ccccttnnaa antanttnnn ggtnttnaan ancggnttcc 420
cccncggttn tgggcatntn tttttncgcg ncgnttatag aganaaaaaa aaantttttnt 480
tcncccttta tacaccggca nttaaaantt ngaaaancng ggnaannggg ngtttnttnn 540
aaaaaacnaa atnttttntt tnagccncna aaaaaanctg agttggcccc cnctnnaacc 600
ccnttggngg gaaaantnaa aaagtgcaaa cccccnctct nccccnatct aganaagtag 660
nntcctcccc ccctcccnna aaannntaggg agnnnctccc gnnnc 705

<210> 8
<211> 644
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(644)
<223> n = A,T,C or G

<400> 8
attaaccctc actaaaggga acaaaagctg gagctccacc gcggtggcgg ccgctctaga 60
actagtggat ccccc gggg n gcncgaattc ngaangaggc ctcntgccna ntnctnatga 120
nagcgaagga ngtannncag ntcgnaccng attgaccntn aggatatcca ntacncnang 180
gggggcccgg nncccaatnc nccctatagt gagtcnnatc acaattcact ggaccgncgt 240
ttcaaagggn gagntttggg ggtaagncta tacctaaccc nctctcggnn ttganttaca 300
cgtncncggt cngtcattca ncaancacca attgagtntt nancnggtcc tccaggctng 360
nggttgcntn ngggggnnct nagnannaag aattttcaag gctgaaatcc cnntttaacc 420
cccaantngn nnagnaaggg nggtnctgcc caannacaaa aaatttgggg atannnggca 480
aggtnanncc angttgnanc ccaacagggt nccccccnngn acagnaacnt ggggnnatnt 540
ngaaaacntc nnctnttnnc ncccnaatng ngagtnaatg ggggcnnncc cccatttggn 600
gaaaaattnc gnggganccgg nccncgggan tttnaaatna aanc 644

<210> 9
<211> 215
<212> PRT
<213> Homo sapiens

<220>
<221> VARIANT
<222> (1)...(215)
<223> Xaa = Any Amino Acid

<400> 9
Ile Asn Pro His Glx Arg Glu Gln Lys Leu Glu Leu His Arg Gly Gly
 1   5   10   15
Gly Arg Ser Arg Thr Ser Gly Ser Pro Gly Xaa Xaa Glu Phe Xaa Xaa
            20   25   30
Arg Pro Xaa Ala Xaa Xaa Xaa Glx Xaa Arg Arg Xaa Xaa Xaa Xaa Ser
        35   40   45
Xaa Xaa Ile Asp Xaa Xaa Asp Ile Xaa Tyr Xaa Xaa Gly Gly Pro Xaa
    50   55   60
Pro Asn Xaa Pro Tyr Ser Glu Xaa Xaa His Asn Ser Leu Asp Xaa Arg
65   70   75   80
Phe Lys Gly Xaa Xaa Leu Gly Val Xaa Leu Tyr Leu Thr Xaa Ser Arg
                85   90   95
Xaa Glx Xaa Thr Arg Xaa Arg Xaa Val Ile Xaa Gln Xaa Pro Ile Glu
            100   105   110
Xaa Xaa Xaa Gly Pro Pro Gly Xaa Xaa Leu Xaa Xaa Gly Xaa Xaa Xaa
        115   120   125
Xaa Lys Asn Phe Gln Gly Glx Asn Pro Xaa Leu Thr Pro Xaa Xaa Xaa
    130   135   140
Xaa Lys Xaa Gly Xaa Ala Gln Xaa Gln Lys Ile Trp Gly Xaa Xaa Ala
145   150   155   160
Arg Xaa Xaa Xaa Val Xaa Xaa Gln Gln Gly Xaa Pro Xaa Xaa Xaa Asn
                165   170   175
Xaa Gly Xaa Xaa Xaa Lys Xaa Xaa Xaa Xaa Xaa Pro Xaa Xaa Xaa Xaa
            180   185   190
Asn Gly Gly Xaa Pro Pro Phe Xaa Glu Lys Xaa Xaa Gly Xaa Xaa Xaa
        195   200   205
Arg Xaa Phe Xaa Xaa Lys Xaa
    210   215

<210> 10
<211> 665
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(665)
<223> n = A,T,C or G

<400> 10
attaaccctc actaaaggga acaaaagctg gagctccacc gcggtggcgg ccgctctaga 60
actagtggat cccccgggct gcccggtacc caattcgccc tatagtgagt cgtattacaa 120
ttcactggcc gtcgttttac aagggcgagc ttgaaggtaa gcctatccct aaccctctcc 180
tcggtctcga ttctacgcgt accggtcatc atcaccatca ccattgagtt taaacggtct 240
ccagcttggc tgttttggcg gatgagagaa gattttcagc ctgatacaga ttaaatcaga 300
aacgcangaa gnggggtcttg ataaaaacaa gaaatttggc cttggcgggn agttagcngc 360
gggtnggtnc ccaccctnga ccccattgcc cgaaactcac gnaagntgaa aaccgcccgg 420
naaccgcccg nattgggtaa gtggtggggg gtccttcccc cattgccgaa naagntnngg 480
ggaaactngc ccagggcact tcaaaatnaa aaaacgnaaa ggggctnnan gtccgaaaaa 540
naaattgggg gcctttcccg ggttgnaaac ctggttgggt ttggggccgg ggggaacncc 600
tcntcctngn agtttnggac aaaaatcccg ccnggggnnc gcgggatttt gaaaccgttn 660
tgcnn 665

<210> 11
<211> 222
<212> PRT
<213> Homo sapiens

<220>
<221> VARIANT
<222> (1)...(222)
<223> Xaa = Any Amino Acid

<400> 11
Ile Asn Pro His Glx Arg Glu Gln Lys Leu Glu Leu His Arg Gly Gly
 1   5   10   15
Gly Arg Ser Arg Thr Ser Gly Ser Pro Gly Leu Pro Gly Thr Gln Phe
            20   25   30
Ala Leu Glx Glx Val Val Leu Gln Phe Thr Gly Arg Arg Phe Thr Arg
        35   40   45
Ala Ser Leu Lys Val Ser Leu Ser Leu Thr Leu Ser Ser Val Ser Ile
    50   55   60
Leu Arg Val Pro Val Ile Ile Thr Ile Thr Ile Glu Phe Lys Arg Ser
65   70   75   80
Pro Ala Trp Leu Phe Trp Arg Met Arg Glu Asp Phe Gln Pro Asp Thr
                85   90   95
Asp Glx Ile Arg Asn Ala Xaa Xaa Gly Ser Glx Glx Lys Gln Glu Ile
            100   105   110
Trp Pro Trp Arg Xaa Val Ser Xaa Gly Xaa Xaa Pro Thr Xaa Asp Pro
        115   120   125
Ile Ala Arg Asn Ser Xaa Lys Xaa Lys Thr Ala Arg Xaa Pro Pro Xaa
    130   135   140
Leu Gly Lys Trp Trp Gly Val Leu Pro Pro Leu Pro Xaa Lys Xaa Xaa
145   150   155   160

```
Gly Asn Xaa Pro Arg Ala Leu Gln Asn Xaa Lys Thr Xaa Arg Gly Xaa
                165                 170                 175
Xaa Ser Glu Lys Xaa Ile Gly Gly Leu Ser Arg Val Xaa Asn Leu Val
            180                 185                 190
Gly Phe Gly Ala Gly Gly Asn Xaa Xaa Ser Xaa Xaa Phe Xaa Thr Lys
        195                 200                 205
Ile Pro Xaa Gly Xaa Arg Gly Ile Leu Lys Pro Xaa Cys Xaa
    210                 215                 220
```

<210> 12
<211> 661
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(661)
<223> n = A,T,C or G

<400> 12
taatacgact cactataggg cgaattgggt accgggcccc ccctcgagtt ttttttttt 60
ttnnttnttt tttnttttnc tnctttttntt ttnttntnnn ctcnctttt ctatnttctt 120
tttncctcca ctctacnggg gnntcccccg nggggcaaaa ncccnnnncc ngggggnnnc 180
ntnttttttt gggggncccc ccccnggggg ggnncccnct ttttttttc cctttntntg 240
gggggtttaa angggngngt tnnnggggna ganattaccn ancccccccc cccggnnncn 300
nanttcnccg cgantnccgg ngngtcttcc ccccttcccc ttgnggnttt aaagggngcc 360
ncctnncttt ccgnnttttt tnngcnnggg gaaaaaaaaa aaaatttnnc cccctggntn 420
cccccaattt nannnccccc gnccccccca anaaanggtt ttnnnnaaan aaanaaaaan 480
ttttnctggn ggggggcnaa aaaagncggg gggggntccc ccccccggnn ccccctgtgg 540
gggtaatttt tcaaangggn naacccccctc ntntaccccc nnttgttntc tggggggggn 600
ncccccccnc cnctccngaa gaaaggnggg atanngttcn tccctcnacn tanaaaaaan 660
n   661

<210> 13
<211> 16
<212> PRT
<213> Homo sapiens

<400> 13
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Glx Tyr Asp Ser Leu Glx Gly Glu Leu Gly Thr Gly Pro Pro Leu Glu
 1               5                  10                  15
```

<210> 14
<211> 57
<212> PRT
<213> Homo sapiens

<400> 14
```
Leu Thr Leu Thr Lys Gly Asn Lys Ser Trp Ser Ser Thr Ala Val Ala
 1               5                  10                  15
Pro Leu Asn Trp Asp Pro Pro Gly Cys Arg Lys Phe Glu Phe Pro Ala
            20                  25                  30
Ala Arg Gly Ile Pro Leu Val Leu Glu Arg Arg His Arg Gly Gly Ala
```

35 40 45

Pro Ala Phe Val Pro Phe Ser Glu Gly

50 55